

Work Order ID 123318

Thursday, August 07, 2014 11:12:48 AM

647.0112  
B123318  
REV: A

\*123318\*

Page 1

Item ID: 647.0112

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Strut Bracket

Start Date: 8/07/14

Start Qty: 30.00

\*30\*

Cust Item ID:

Required Date: 8/07/14

Req'd Qty: 30.00

\*30\*

Customer:

Reference:

Approvals:

Process Plan: MLJ

Date: 14-08-07

Tooling:

Date: \_\_\_\_\_

Run Start

\*NR1\*

QC:

Date: \_\_\_\_\_

SPC (Y/N):

Date: \_\_\_\_\_

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

| Draw Nbr | Revision Nbr |
|----------|--------------|
| 647.0100 | A            |

100

\*100\*

Waterjet

FLOW CNC Waterjet

FLOW WATER JET

Memo

1-Cut as per Dwg

Dwg Rev: A

Prog Rev: A

2-Deburr if necessary

0.00

0.00

(35)

2/Dec 14/09/11

110

\*110\*

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

(35)

2/Dec 14/09/11

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



DQA:

Date:

15/05/05



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

15/05/01

Work Order update only ☐

|                           |                                                                                                                                                                                           |                                        |                                               |                                              |                                      |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------|----------------------------------------------|--------------------------------------|
| Work Order: <u>123319</u> | <b>DISPOSITION</b><br>Rework <input type="checkbox"/><br>Scrap <input checked="" type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b>      |                                               |                                              |                                      |
| Part No. <u>647 1042</u>  |                                                                                                                                                                                           | Skid-tube <input type="checkbox"/>     | Crosstube <input type="checkbox"/>            | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |
| NCR No. <u>15-4850</u>    |                                                                                                                                                                                           | Machining <input type="checkbox"/>     | Small Fab <input checked="" type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/>   | Quality <input type="checkbox"/>     |
|                           |                                                                                                                                                                                           | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/>            | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |
|                           |                                                                                                                                                                                           | Large Fab <input type="checkbox"/>     | Composite <input type="checkbox"/>            | Supplier <input type="checkbox"/>            |                                      |

| Root Cause                                        | Date     | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng           | Action Description                                                                       | Sign & Date                                         | Verification                  | QC Inspector                 |
|---------------------------------------------------|----------|------|-----|-----------------------------------------------------|-----------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------|------------------------------|
| Design                                            |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Doc/Data                                          |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Equip/Tooling <input checked="" type="checkbox"/> |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Handling/Pre                                      |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Material                                          | 15/03/26 | 130  | 1   | Part was scrap stock in the j's                     | J<br>15/03/26<br>Q2222<br>2 | One part was scrap no replace<br>had to rework<br>T's. rad to<br>Tight piece<br>Stock in | 15/03/26<br>DAS<br>36<br>9-89<br>J.C.L.<br>15/03/26 | DAS<br>30<br>9-89<br>15/03/26 | DAS<br>9<br>9-89<br>15-03-26 |
| Operator                                          |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Offset/Setup                                      |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Process                                           |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Supplier                                          |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Training                                          |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Transport                                         |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |
| Unapproved                                        |          |      |     |                                                     |                             |                                                                                          |                                                     |                               |                              |

## FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input checked="" type="checkbox"/> Other |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

T's was not wrong  
had to be rework

**Work Order ID 123318**

Thursday, August 07, 2014 11:12:48 AM

**\*123318\***

Page 3

Item ID: 647.0112 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Strut Bracket  
Start Date: 8/07/14 Start Qty: 30.00 **\*30\*** Cust Item ID:  
Required Date: 8/07/14 Req'd Qty: 30.00 **\*30\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                    | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp    |
|--------------------------------|-------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|-------------------|
| 150                            |                                                             | 0.00                 |         |        |              |               |               |                  | DAS<br>41<br>9-89 |
| <b>*150*</b>                   |                                                             |                      |         |        |              | <b>34</b>     |               |                  |                   |
| SprayPaint                     | Memo                                                        | 0.00                 |         |        |              |               |               |                  |                   |
| Spray Painting                 | PRIME AS PER DWG NOTE 6                                     |                      |         |        |              |               |               |                  | 15-4-4            |
|                                | BATCH: <u>131277</u>                                        |                      |         |        |              |               |               |                  |                   |
| 160                            | QC14- Inspect Spray Paint                                   | 0.00                 |         |        |              |               |               |                  | DAS<br>38<br>9-89 |
| <b>*160*</b>                   |                                                             |                      |         |        |              | <b>39</b>     |               |                  |                   |
| QC                             | Memo                                                        | 0.00                 |         |        |              |               |               |                  |                   |
| Quality Control                |                                                             |                      |         |        |              |               |               |                  | APR 06 2015       |
| 170                            | Identify as per dwg & Stock Location: <u>cdk 109</u>        | 0.00                 |         |        |              |               |               |                  |                   |
| <b>*170*</b>                   |                                                             |                      |         |        |              | <b>39</b>     |               |                  |                   |
| Packaging                      | Memo                                                        | 0.00                 |         |        |              |               |               |                  | DAS<br>27<br>8-88 |
| Packaging                      | ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV*** |                      |         |        |              |               |               |                  |                   |

APR 07 2015

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
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| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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**Work Order ID 123318**

Thursday, August 07, 2014 11:12:48 AM

**\*123318\***

Page 4

Item ID: 647.0112 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Strut Bracket  
Start Date: 8/07/14 Start Qty: 30.00 **\*30\*** Cust Item ID:  
Required Date: 8/07/14 Req'd Qty: 30.00 **\*30\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                    | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 180                            | QC21- Final Inspection - Work Order Release | 0.00                 |         |        |              |               |               |                  |                |
| <b>*180*</b>                   |                                             |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                        | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |                                             |                      |         |        |              |               |               |                  |                |

*Handwritten: 15.47 / 11.05*

*Handwritten: 15.4-7*

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
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| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

**FAULT CATEGORY**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



# Picklist Print

Thursday, August 07, 2014 11:12:48 AM

Work Order ID: 123318

**\*123318\***

Parent Item: 647.0112

**\*647 0112\***

Parent Item Name: Strut Bracket

Start Date: 8/07/14

Required Date: 8/07/14

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP REV:A 12.08.14 NEW ISSUE DD VERF:JFS

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M304S14GA                       |                        | Purchased     |             | No                  |                  | 100             | sf                 | 196.1500       | 0.0325      | 1.026315     |               |                |        |

**\*M304S14GA\***

304SS sheet .080

**\*\***

08/14/09/11

Location

Loc Qty

Loc Code

MAT020

196.15

M126075

68.15

M129972

128

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(1.2)

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

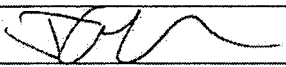
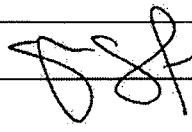
|                                                                                                                                                          |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                          |                                                                                                                                                      |                                                                                                                                                                       |                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                             | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td style="width: 33%;">           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </td> <td style="width: 33%;">           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </td> <td style="width: 33%;">           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </td> <td style="width: 33%;">           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </td> </tr> </table> | Skid-tube <input type="checkbox"/><br>Machining <input type="checkbox"/><br>Thermoforming <input type="checkbox"/><br>Large Fab <input type="checkbox"/> | Crosstube <input type="checkbox"/><br>Small Fab <input type="checkbox"/><br>Finishing <input type="checkbox"/><br>Composite <input type="checkbox"/> | Water Jet <input type="checkbox"/><br>Prod. Eng. Coord. <input type="checkbox"/><br>Rec/Store/Packaging <input type="checkbox"/><br>Supplier <input type="checkbox"/> | Engineering <input type="checkbox"/><br>Quality <input type="checkbox"/><br>Other <input type="checkbox"/> |
| Skid-tube <input type="checkbox"/><br>Machining <input type="checkbox"/><br>Thermoforming <input type="checkbox"/><br>Large Fab <input type="checkbox"/> | Crosstube <input type="checkbox"/><br>Small Fab <input type="checkbox"/><br>Finishing <input type="checkbox"/><br>Composite <input type="checkbox"/>                               | Water Jet <input type="checkbox"/><br>Prod. Eng. Coord. <input type="checkbox"/><br>Rec/Store/Packaging <input type="checkbox"/><br>Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Engineering <input type="checkbox"/><br>Quality <input type="checkbox"/><br>Other <input type="checkbox"/>                                               |                                                                                                                                                      |                                                                                                                                                                       |                                                                                                            |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|                                                                |                                                                                                      |                                                                                         |                                                                                        |                 |                                                                                           |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------|
| <b>APICAL</b><br><br>INDUSTRIES, INC.                          | ENGINEERING CHANGE NOTICE NO. 03985                                                                  |                                                                                         |                                                                                        | SHEET 1 OF 2    |                                                                                           |
|                                                                | DWG NO. 647.0100                                                                                     | REV: A                                                                                  | PREPARED BY J. BECKER                                                                  | DATE: 7/15/13   | EFFECT ON DWG<br><input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC. |
|                                                                | DWG TITLE: SHEET METAL                                                                               |                                                                                         |                                                                                        |                 |                                                                                           |
|                                                                | APPROVED BY: ENGR.  | MFG  | QC  | EFF. NEXT ORDER |                                                                                           |
| TRANSACTION CODES (TC):<br>A-ADD C-CREATE<br>R-REVISE D-DELETE | REASON: REVISED NOTE 2. ADDED 647.0117                                                               |                                                                                         |                                                                                        |                 |                                                                                           |

IS

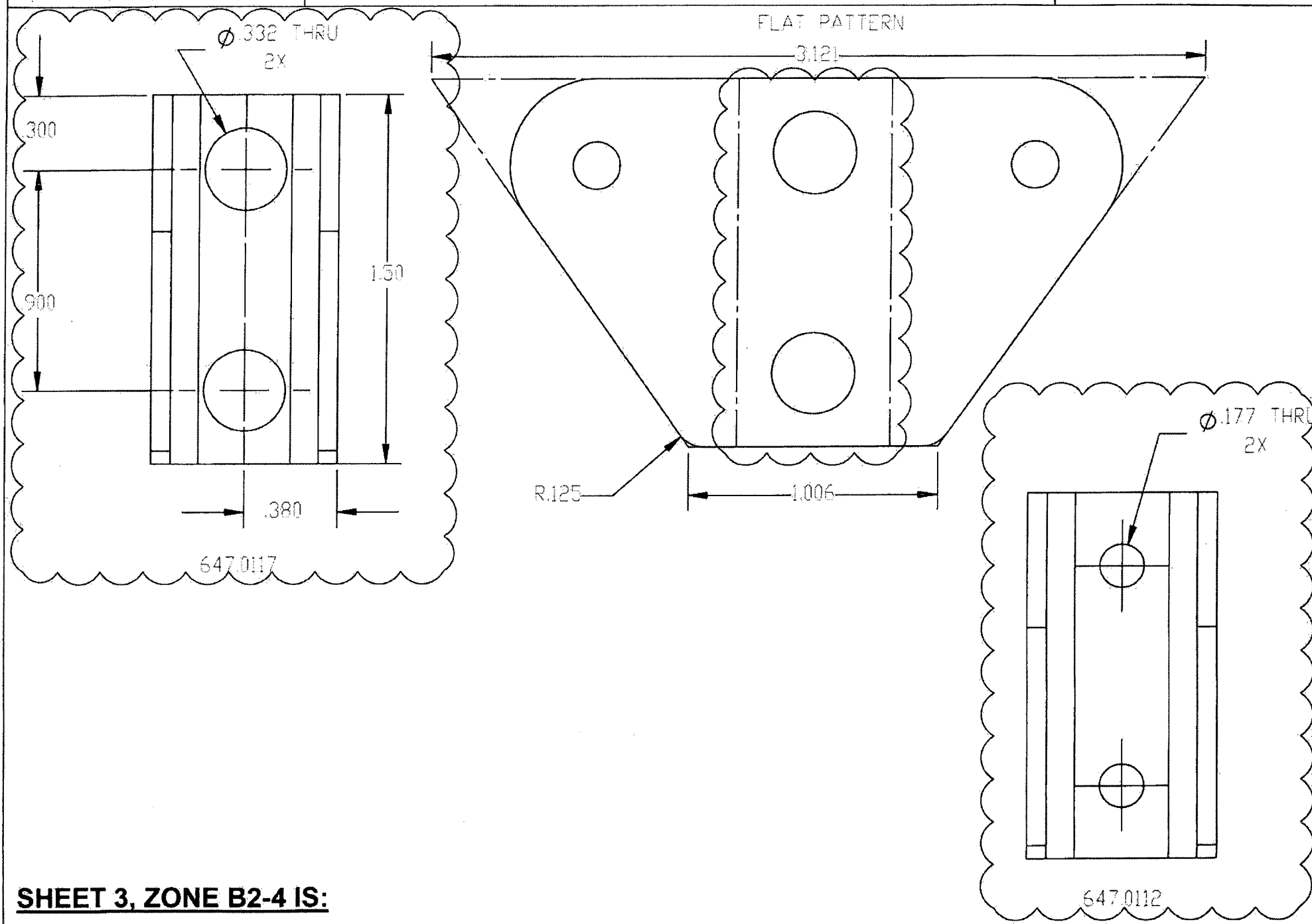
NOTES:

- 1 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.
- 2 FINISH: IAW MPP-172 ANODIZE IAW SECTION 2.1, PRETREATMENT IAW SECTION 3.1 AND PRIMER IAW SECTION 4.1.
- 3. DEBURR AND BREAK ALL SHARP EDGES.
- 4. IDENTIFY IAW MPP-120.
- 5 MATERIAL: 304 SS IAW AMS 5643.
- 6 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N.
- 7 OTHER DIMENSIONS SAME AS 647.0112.

SHOP COPY  
 RETURN TO  
 ENGINEERING  
 UNCONTROLLED COPY  
 SUBJECT TO AMENDMENT  
 WITHOUT NOTICE  
 WORK ORDER  
 NO. 123318 M W  
 14-08-07

**SHEET 1, ZONE D1 IS:**

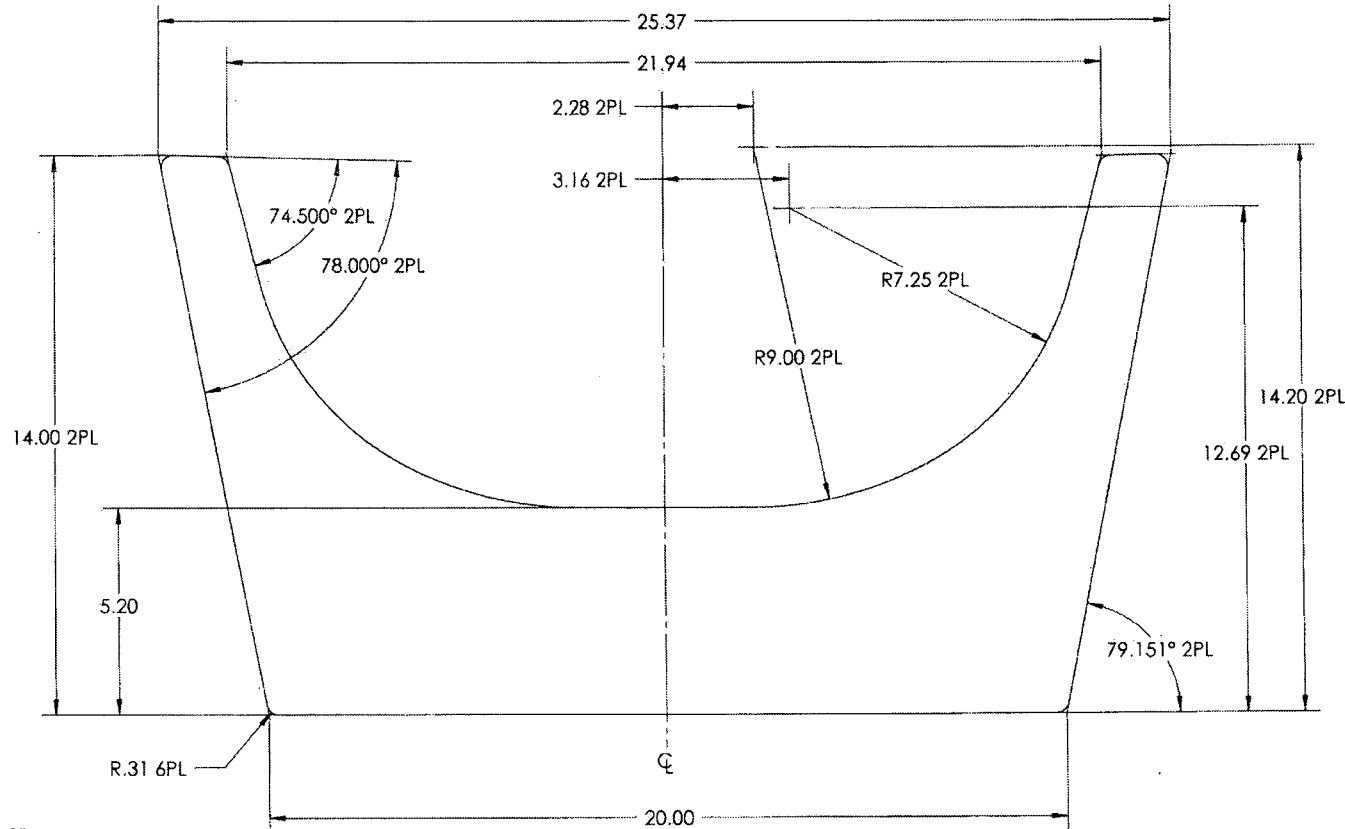
|                                                                                                                                                                   |    |             |  |                                                                          |                                                                     |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------|--|--------------------------------------------------------------------------|---------------------------------------------------------------------|---------------|
|                                                                                                                                                                   | C  | 647.0117    |  | STRUT BRACKET                                                            | △                                                                   | △             |
| F/N                                                                                                                                                               | TC | PART NUMBER |  | DESCRIPTION                                                              | MATERIAL                                                            | SPECIFICATION |
| DOCUMENTS EFFECTED:                                                                                                                                               |    |             |  | CHANGE CATEGORY                                                          | DER REVIEW REQUIRED                                                 |               |
| <input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUCTIONS <input type="checkbox"/> ICA <input type="checkbox"/> FMS <input type="checkbox"/> BOM |    |             |  | <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR | <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |               |



**SHEET 3, ZONE B2-4 IS:**

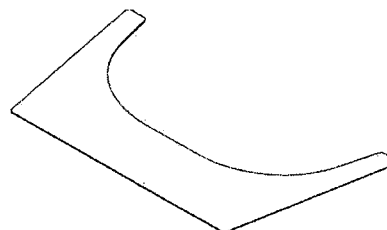
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| REVISIONS |                                      |          |          |
|-----------|--------------------------------------|----------|----------|
| REV.      | DESCRIPTION                          | DATE     | APPROVED |
| 1         | LAST PROTOTYPE REVISION: R12         |          | WMC      |
| 2         | INITIAL RELEASE                      | 03/28/09 | P. BRAVO |
| 3         | INCORPORATED ECN 02729, 00744, 00509 | 04/15/11 | P. BRAVO |



NOTES:

1. MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.
2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; PRETREAT PR-148 ADHESION PROMOTER; PRIME IAW MIL-P-23377J TYPE I CLASS N.
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
5. MATERIAL: 304 SS IAW AMS 5643.
6. FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N.



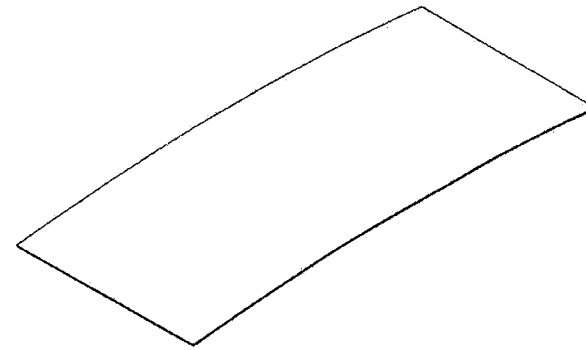
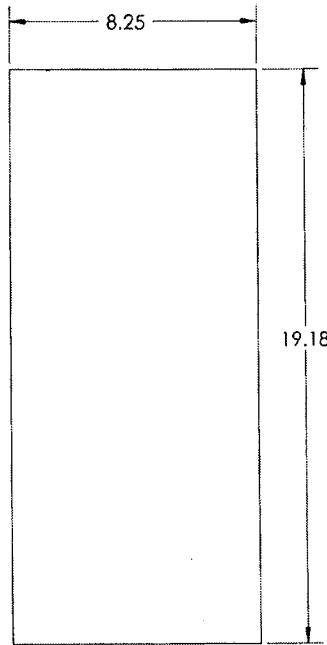
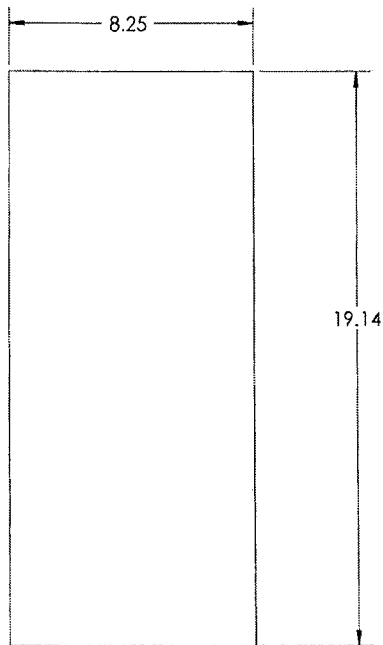
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UNINCORPORATED ECN(S)

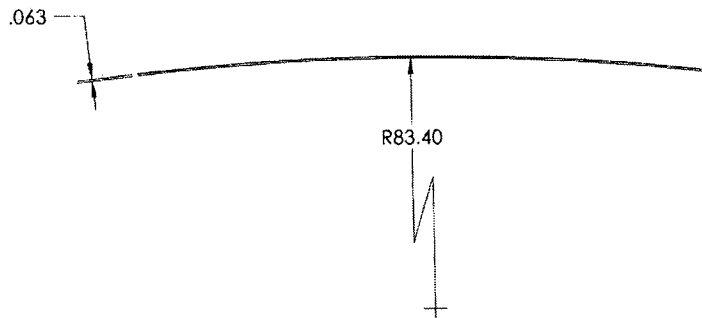
03-985

|                                                                                                                                               |        |          |                                                                    |       |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|--------------------------------------------------------------------|-------|-------|
|                                                                                                                                               |        | 647.0116 | DOUBLER                                                            | △     | △     |
|                                                                                                                                               |        | 647.0115 | CLIP                                                               | △     | △     |
|                                                                                                                                               |        | 647.0114 | CLIP                                                               | △     | △     |
|                                                                                                                                               |        | 647.0113 | STRUT DOUBLER                                                      | △     | △     |
|                                                                                                                                               |        | 647.0112 | STRUT BRACKET                                                      | △     | △     |
|                                                                                                                                               |        | 647.0111 | PANEL                                                              | △     | △     |
|                                                                                                                                               |        | 647.0110 | ROOF DOUBLER                                                       | △     | △     |
|                                                                                                                                               | FIND # | PART #   | DESCRIPTION                                                        | MAT'L | SPEC. |
| QTY                                                                                                                                           |        |          | PARTS LIST                                                         |       |       |
| NEXT ASSY (S)                                                                                                                                 |        |          | APICAL INDUSTRIES                                                  |       |       |
| 646.9500                                                                                                                                      |        |          | 2608 TEMPLE HEIGHTS DR.<br>OCEANSIDE, CA. 92056-3512 (760)724-5300 |       |       |
| ORIGINAL DATE<br>(MM/DD/YY)                                                                                                                   |        |          | SHEETMETAL                                                         |       |       |
| DRAWN BY: J. LUCIER                                                                                                                           |        |          |                                                                    |       |       |
| CHECKED BY: P. BRAVO                                                                                                                          |        |          |                                                                    |       |       |
| DRAWING APPROVAL<br>(P. BRAVO)<br>05-20-09                                                                                                    |        |          |                                                                    |       |       |
| CONTRACT NO.                                                                                                                                  |        |          | SCALE NONE                                                         |       |       |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>3 PLACE DECIMALS ± .01<br>2 PLACE DECIMALS ± .05<br>ANGLES ± .5° |        |          | SITE CAGE CODE DWG. NO. REV.                                       |       |       |
|                                                                                                                                               |        |          | B 07MZ6 647.0100 A                                                 |       |       |
|                                                                                                                                               |        |          | SCALE NONE 1 SHEET 1 OF 6                                          |       |       |

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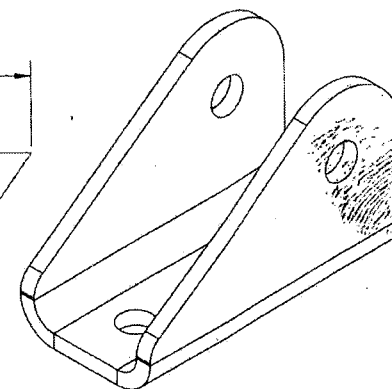
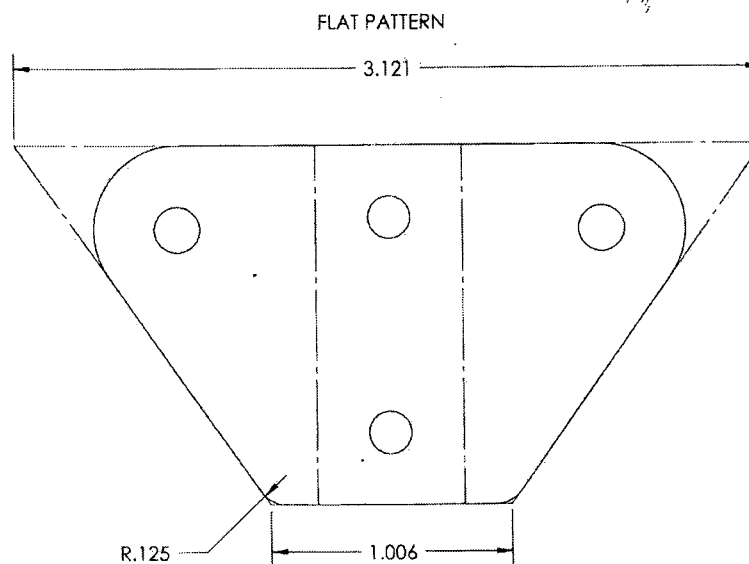
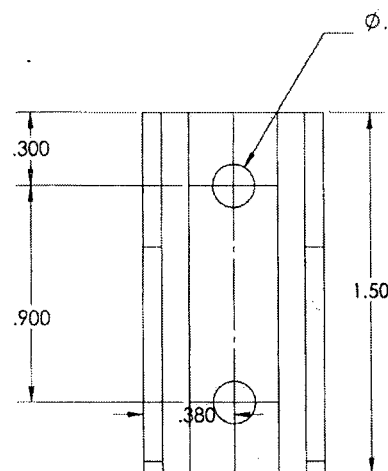
FLAT PATTERN



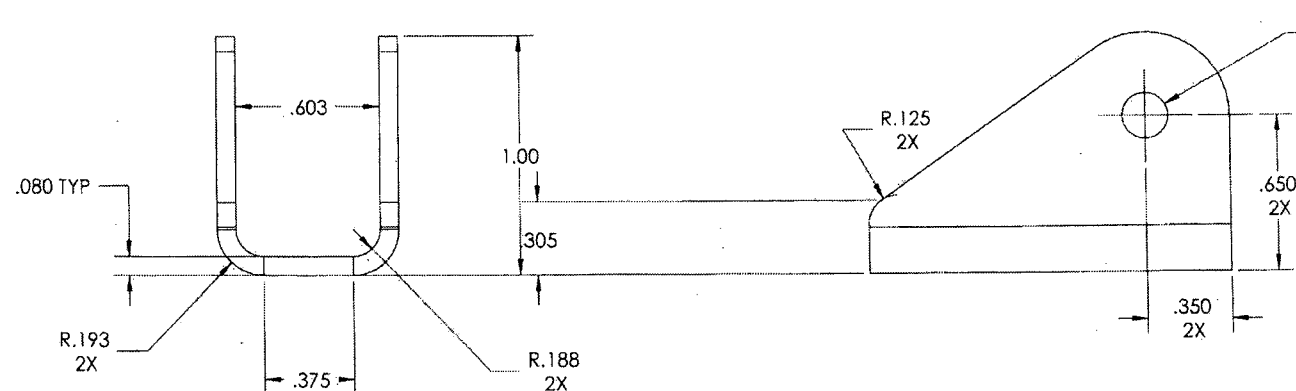
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| ORIGINAL DATE: 05-26-04                                                                                                                        |  | APICAL INDUSTRIES                        |              |
| DRAWN BY: C. CHOI                                                                                                                              |  |                                          |              |
| CHECKED BY: P. BRAYO                                                                                                                           |  | 2408 TEMPLE HEIGHTS DR.                  |              |
| DRAWING APPROVAL: P. BRAYO                                                                                                                     |  | OCEANSIDE, CA. 92056-3512 (760) 724-5300 |              |
| CONTRACT NO.                                                                                                                                   |  | SHEETMETAL                               |              |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>2 PLACE DECIMALS ± .01<br>3 PLACE DECIMALS ± .005<br>ANGLES ± .5° |  | SIZE: CAGE CODE: DWG. NO. 647.0100       | REV. A       |
|                                                                                                                                                |  | SCALE: NONE                              | SHEET 2 OF 6 |

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| REVISIONS |             |      |          |
|-----------|-------------|------|----------|
| REV.      | DESCRIPTION | DATE | APPROVED |
|           |             |      |          |
|           |             |      |          |



647.0112

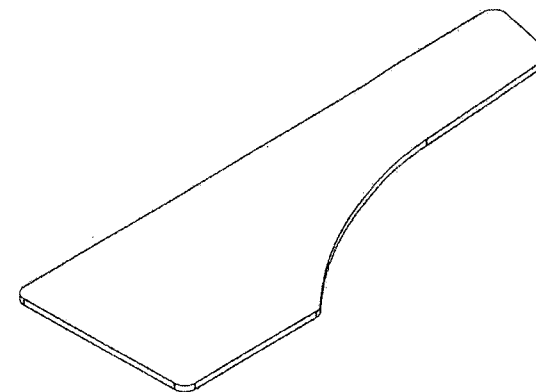
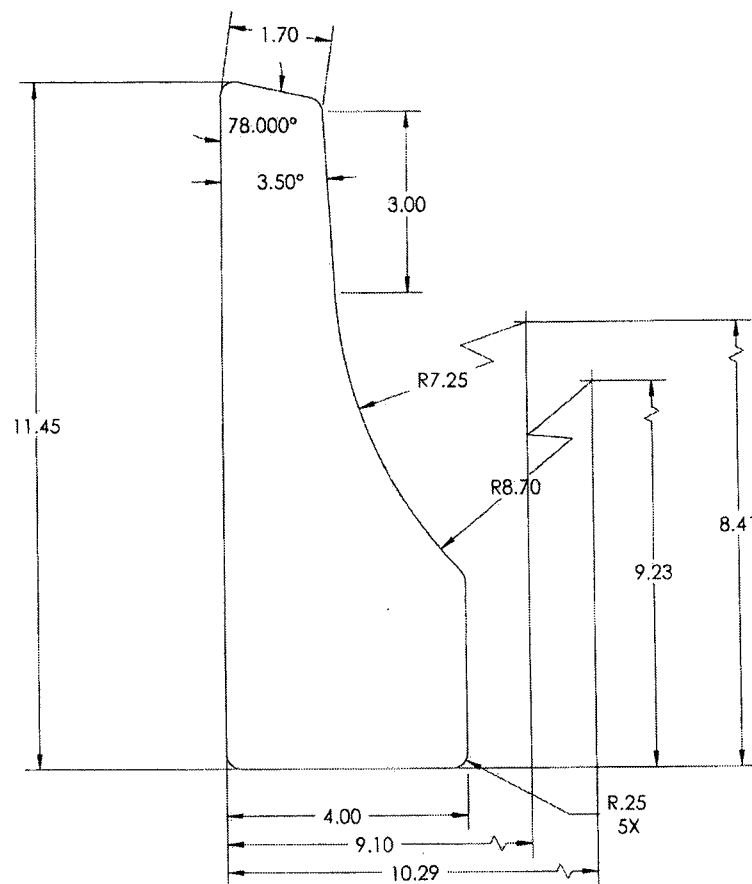


|                                                                                                                                                |          |                                                                                                                     |  |
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| ORIGINAL DATE<br>(MM/DD/YY)                                                                                                                    |          | DESIGNED<br>(NAME)                                                                                                  |  |
| DRAWN BY<br>P. ROSARIO                                                                                                                         |          | CHECKED<br>P. BRAYO                                                                                                 |  |
| DRAWINGS APPROVAL<br>P. BRAYO                                                                                                                  |          | CONTRACT NO.                                                                                                        |  |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>2 PLACE DECIMALS ± .01<br>3 PLACE DECIMALS ± .005<br>ANGLES ± .5° |          | <b>APICAL INDUSTRIES</b><br>2608 TEMPLE HEIGHTS DR.<br>OCEANSIDE, CA. 92056-3512 (760)724-5300<br><b>SHEETMETAL</b> |  |
| SHEET (CADD CODE)                                                                                                                              | DWG. NO. | REV                                                                                                                 |  |
| B 07M26                                                                                                                                        | 647.0100 | A                                                                                                                   |  |
| SCALE NONE                                                                                                                                     |          | SHEET 3 OF 3                                                                                                        |  |

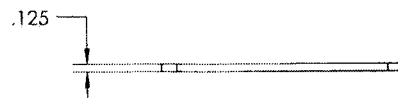


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| REVISIONS |             |      |          |
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| REV.      | DESCRIPTION | DATE | APPROVED |
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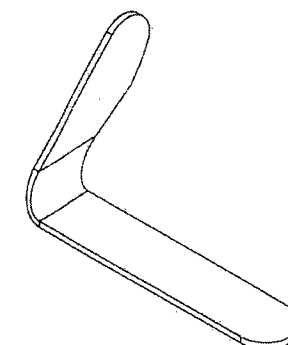
647.0113



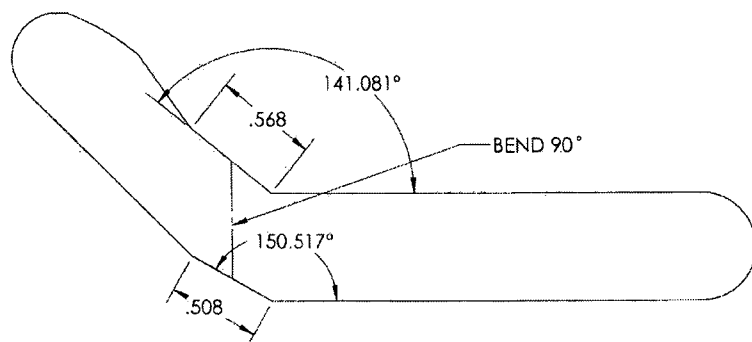
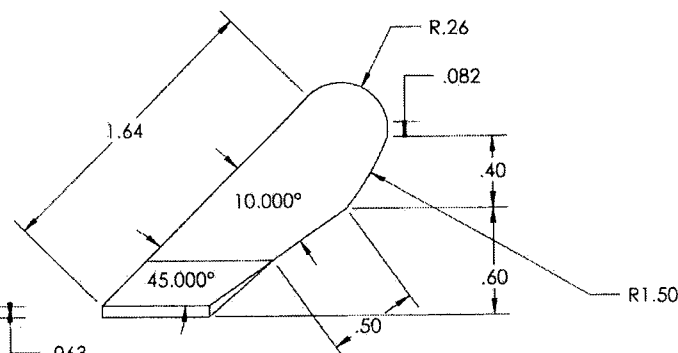
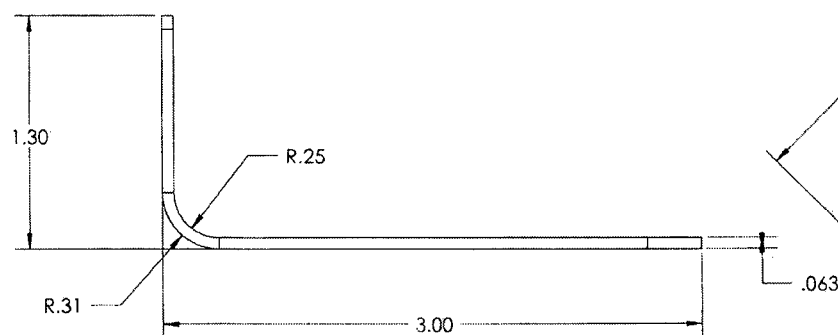
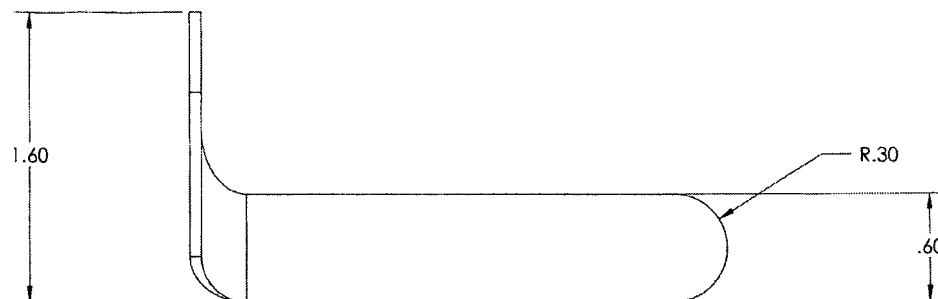
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|------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------|--------------|
| ORIGINAL DATE:<br>24/02/2010 05:28:09                                                                                                          |  | APICAL INDUSTRIES                       |              |
| DRAWN BY: J. KOSANO                                                                                                                            |  | 2608 TEMPLE HEIGHTS DR.                 |              |
| CHECKED BY: P. BRAVO                                                                                                                           |  | OCEANSIDE, CA. 92056-3512 (760)724-5300 |              |
| DRAWING APPROVAL: P. BRAVO                                                                                                                     |  | SHEETMETAL                              |              |
| DATE: 02/26/09                                                                                                                                 |  | DWG. NO. 647.010J                       |              |
| CONTRACT NO.:                                                                                                                                  |  | REV. A                                  |              |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>3 PLACE DECIMALS ± .01<br>3 PLACE DECIMALS ± .005<br>ANGLES ± .5° |  | SCALE: NONE                             | SHEET 4 OF 6 |

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| REVISIONS |             |      |          |
|-----------|-------------|------|----------|
| REV.      | DESCRIPTION | DATE | APPROVED |
|           |             |      |          |
|           |             |      |          |



647.0114 SHOWN  
647.0115 OPPOSITE

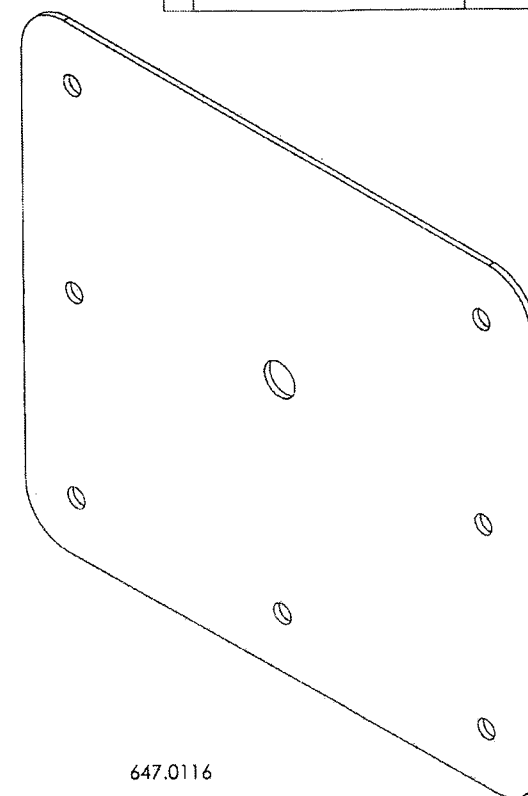
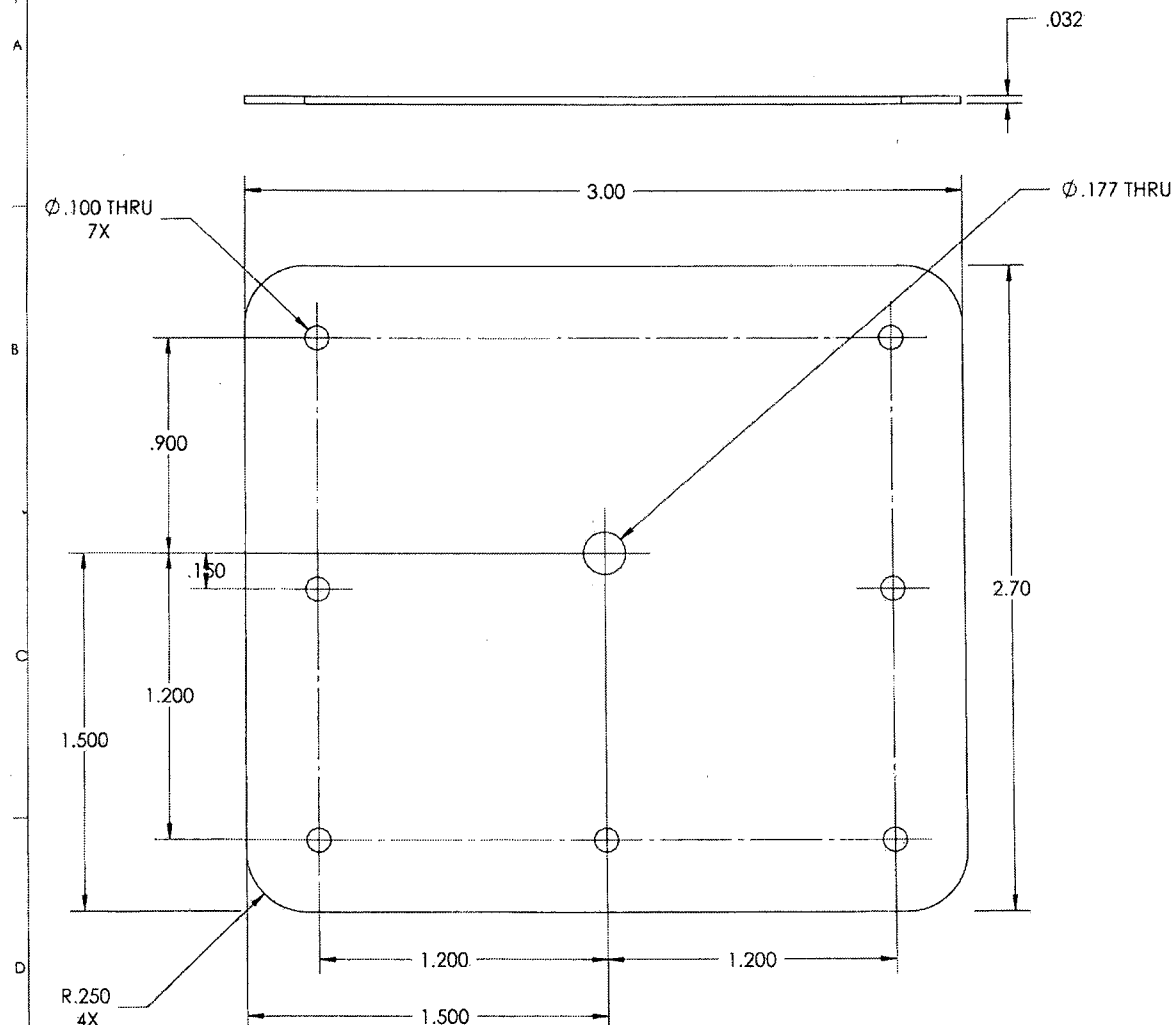


FLAT PATTERN

|                                                                                                                    |                        |                                                                                         |                  |
|--------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------|------------------|
| ORIGINAL DATE<br>10/20/04 BY<br>05/28/07                                                                           |                        | APICAL INDUSTRIES<br>2608 TEMPLE HEIGHTS DR.<br>OCEANSIDE, CA. 92056-3512 (760)724-5300 |                  |
| DRAWN BY<br>B. FOSAND                                                                                              | CHECKED BY<br>D. BRAVO | SHEETMETAL                                                                              |                  |
| DRAWING APPROVAL<br>P. BRAVO                                                                                       | DATE<br>05/28/07       | REV. A                                                                                  | DATE<br>05/28/07 |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>3 PLACE DECIMALS ± .01<br>ANGLES ± 1° |                        | SCALE: NONE                                                                             | SHEET: 3 OF 6    |

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| REVISIONS |             |      |          |
|-----------|-------------|------|----------|
| REV.      | DESCRIPTION | DATE | APPROVED |
|           |             |      |          |
|           |             |      |          |



647.0116

|                                                                                                                                  |  |                                          |              |
|----------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------|--------------|
| ORIGINAL DATE<br>1/20/01                                                                                                         |  | APICAL INDUSTRIES                        |              |
| DRAWN BY: T. CROFT                                                                                                               |  | 2608 TEMPLE HEIGHTS DR.                  |              |
| P. ROSANO                                                                                                                        |  | OCEANSIDE, CA. 92056-3512 (760) 724-5300 |              |
| DRAWING APPROVAL:<br>P. ROSANO                                                                                                   |  | SHEETMETAL                               |              |
| CONTRACT NO:                                                                                                                     |  | 647.0100                                 |              |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>2 PLACE DECIMALS $\pm .01$<br>ANGLES $\pm .5^\circ$ |  | SIZE: 8                                  | REV: A       |
|                                                                                                                                  |  | CAGE CODE: 07M26                         |              |
|                                                                                                                                  |  | SCALE: NONE                              | SHEET 6 OF 6 |